



>>Entry Name: 3,4,7,8-Tetramethyl-1,10-phenanthroline, 9Cl

CAS Registry Number: 1660-93-1

Molecular Formula: C₁₆H₁₆N₂

Molecular Weight: 236.316

Accurate Mass: 236.131348

Percentage Composition: C 81.32%; H 6.82%; N 11.85%

Use/Importance: Used as redox indicator

Physical Description: Cryst. (C₆H₆ or MeOH)

Melting Point: Mp 275-276°. Mp 284-285°

pKa Value: pK_{a1} 6.31 (25°)

Other Data: E^o +0.850 V (25°). λ_{max} 500 nm

Aldrich: 16288-4

Sigma: T1765

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **3**, 477B, (*nmr*)

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 891B, (*ir*)

Brandt, W.W. *et al.*, *Anal. Chem.*, 1949, **21**, 1313, (*use, ind*)

Case, F.H., *J.A.C.S.*, 1949, **71**, 1828, (*synth*)

Schilt, A.A. *et al.*, *J. Phys. Chem.*, 1956, **60**, 1546, (*pKa*)

Calf, G.E. *et al.*, *Aust. J. Chem.*, 1963, **16**, 833, (*synth*)

Butt, G. *et al.*, *J. Het. Chem.*, 1981, **18**, 641, (*synth, pmr*)